July 17, 2019

REQUEST FOR PROPOSALS
RFP MODIFICATION No. 2
Right of Way & Real Estate IT System Services for NYSDOT
Contract #C037856

Dear Interested Parties:

Reference is made to the subject solicitation wherein the following changes are hereby incorporated:

1. A revised version of Attachment 18 – Firm Experience Requirements is hereby attached. The Consultant is responsible for utilizing the correct version.

2. A revised version of Attachment 19 – Project Plan & Staffing is hereby attached. The Consultant is responsible for utilizing the correct version.

3. A revised version of Attachment 20 – OITS Technology Services and Standards Overview is hereby attached. The Consultant is responsible for utilizing the correct version.

4. A revised version of Attachment 23 – Ongoing System Support, Maintenance and Enhancement Requirements is hereby attached. The Consultant is responsible for utilizing the correct version.

5. A revised version of Attachment 27 – ITS Design Approach is hereby attached.
New York State Department of Transportation
Request for Proposals for Contract #C037856 for
Right of Way and Real Estate IT System Services

Attachment 18
Technical Proposal Response: Firm Experience Requirements

Proposer’s Name: Enter Proposer Name Here
Date: _______________

Instructions:
• For each requirement contained within this document a response is required.
• If additional space is needed then each Proposer should clearly label their response with the requirement identifier.
• NYS reserves the right to allow itself and/or the Proposer to correct obvious errors of omission.

GENERAL: The qualifications and prior experience of the proposing Consultants are of great importance to NYSDOT. Direct, prior experience regarding delivery of user-friendly, effective and efficient IT solutions featuring (to the degree applicable) highway work permitting processes is highly desirable. Comparable firm experience is allowed only if a direct relevancy is clear. Provide a list of projects currently in progress and those completed within the last three to five years which are relevant to this effort. Proposers must demonstrate their experience and expertise through past and current project attestations and reachable, verifiable references. NYSDOT reserves the right to request information from any source so named and to contact additional references (including appropriate references not specifically named by proposers) to completely verify all offered experience.

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description: <strong>Organizational Overview</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ES1</td>
<td>The organizational overview should consist of a succinct statement outlining corporate/business history including a general mission statement, the overall number of employees per position, and other general information about the firm. The Offeror must demonstrate that it possesses adequate staffing resources, financial resources and organization to perform the type, magnitude and quality of work specified herein this RFP, and demonstrate that the Offeror has been in continuous operation for at least the past five (5) years. In addition, the Proposer must provide a statement of previous experience that qualifies the Proposer to provide the Project Services. Proposer may include information not defined as required in this section but deemed necessary to fully understand the Proposer’s Company experience and Staff Qualifications.</td>
</tr>
</tbody>
</table>

ES1 - Proposer’s Response:
### Company Experience

Provide a description of the Proposer’s direct, prior experience in providing Right of Way management system software and services to clients with complex work environments and a large number of users. Describe this experience and related services as well as describing the client in each case. The number of years the Proposer’s team has been providing Right of Way management system software and services. Information documenting the complexity (large project, multi-year, multi-site, multi-agency, etc.) of previous implementations. This should include, but not be limited to:

1. the type of client (government entity, private company, etc.)
2. the number of locations
3. the project duration
4. the number of Proposer FTE’s involved in the implementation
5. the number of client FTE’s involved in the implementation
6. and any other information relevant to describing the client organization in the context of this RFP

### Company References

Submit relevant project and contact information for reachable references for at least three (3) projects currently in progress and three (3) projects that have been completed within the last five (5) years. It is preferred that each cited project experience be of similar scale and scope to this RFP. All cited company references must be reachable (i.e., willing to provide a reference on behalf of the proposer to NYSDOT upon request). The references should be willing to provide information via an e-mailed reference response form and possibly follow that up with a conference call to speak further on the proposer's behalf.

Fill out the requested information using the provided form. Use one form for each company reference provided, for at least two past project references. Be sure to cover the proposed Prime Consultant and each proposed Subconsultant.

**Reference Company Name:**

**Reference Main Line of Business:**

**Reference Contact Information**

<table>
<thead>
<tr>
<th>Primary Contact Person’s Name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td></td>
</tr>
<tr>
<td>Affiliation/Company Employed By:</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
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<tr>
<td>E-mail:</td>
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</tbody>
</table>

**Project Information**

<table>
<thead>
<tr>
<th>Project Name:</th>
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<tbody>
<tr>
<td>Project Start Date:</td>
<td></td>
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<tr>
<td>Project End Date:</td>
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<tr>
<td>Project Budget:</td>
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</tbody>
</table>

**Number of Staff Involved:**

**Types of Staff Involved:**

*Degree to which offered key personnel were primarily responsible for project delivery:*
**Description of all services provided and how they were/are comparable to the size and scope of the services specified in this RFP:**

**An explanation of the size and complexity of the project, including how it compares in size to this project:**

**A list of all subconsultants and the duties they performed (if applicable):**

**Project results and benefits delivered to the client**

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description: Experiences with Subconsultant</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES4</td>
<td>Information documenting the Proposer’s experience working with any proposed sub-consultants (e.g. nature of the relationship, number of engagements worked together, duration of engagements, percent split between firms, etc.).</td>
</tr>
</tbody>
</table>

**ES4 - Proposer’s Response:**

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description: Current Installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES5</td>
<td>Summary information documenting the total number of installations of the solution proposed for use by the State that were configured, customized and implemented, and are currently in production in NYS or other jurisdictions.</td>
</tr>
</tbody>
</table>

**ES5 - Proposer’s Response:**

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description: Problematic, Cancelled or Failed Implementations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES6</td>
<td>Identify and explain any problematic, cancelled or failed implementations, implementations that were not completed on schedule of the Proposer’s proposed solution, resulted in litigation, alternative dispute resolution proceedings, contract escalation, formal complaint against the Proposer, chargeback or liquidated damages, in the last ten (10) years or that are currently pending litigation. Provide a full explanation of the reasons for the proceedings, problems, cancellation or failed implementation including the resolution of the issue.</td>
</tr>
</tbody>
</table>

**ES6 - Proposer’s Response:**

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description: Customizations</th>
</tr>
</thead>
</table>
| ES7       | Customization Services: At this part of its Technical Proposal, the Proposer, should:  
1. acknowledge its agreement to provide customization services to meet business requirements not met with the core/configured product;  
2. describe how the Proposer proposes to provide said services; and  
3. provide detail as regards to the availability and capacity of the Proposer to provide such services. |

**ES7 - Proposer’s Response:**
New York State Department of Transportation  
Request for Proposals for Contract #C037856 for  
Right of Way and Real Estate IT System Services  

Attachment 19  
Technical Proposal Response: Project Plan & Staffing Requirements  

Proposer’s Name:  Enter Proposer Name Here  

Date:  _______________

Instructions:  
1.  A response is required for each requirement contained within this document.  
2.  If additional space is needed Proposer should clearly label their response with the requirement identifier.  
3.  NYS reserves the right to allow the Proposer to correct obvious errors of omission.  

GENERAL:  As part of the Technical Proposal, each Proposer must deliver a comprehensive Project Plan that clearly articulates a roadmap for success in implementing its solution to deliver and implement NYSDOT’s OROW System.  The proposed Project Plan must include a complete staffing solution and cover all issues regarding provisioning resources to this project over the contract’s life.  Since this is a NYSDOT project with ITS support, Proposers should refer to the NYS Guidebook for Project Management (available at http://www.its.ny.gov/pmmp/guidebook2/index.htm) and/or the Project Management Body of Knowledge (PMBOK) in formulating their response.  Proposed timeframes, schedules, staffing requirements, M/WBE subconsulting, and other management tools, (e.g., risk management and quality management) must be included. A term and condition of the resulting contract will be that these proposals will be reviewed, refined and agreed to by the NYS Project Manager and Consultant following project kickoff.

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – Management Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP1</td>
<td>Provide an organizational chart for the project showing the names of the Consultant’s Project Manager, all proposed sub consulting firms (featuring proposed M/WBEs), and identify all proposed key personnel. Include an estimate of total level of effort hours to be contributed by each of the key personnel to each task and an estimate of total level of effort hours for each task. Discuss all management plans to ensure effective and efficient delivery of services while meeting the project objectives. If sub consultants are to be used, explain the specific need for the expertise and describe the arrangements. Discuss your plan for phasing project personnel into the effort. The Consultant’s Project Manager shall serve as the primary contact with the NYSDOT Project Manager. The Consultant’s Project Manager is responsible for the performance of all key personnel, production staff and support staff assigned to this Agreement by the Consultant, as well as contractual matters on the Consultant’s side.</td>
</tr>
</tbody>
</table>
Describe the level and type of interaction with NYSDOT. Describe all efforts to meet or exceed the contract’s 6% MBE, 13% WBE and 6% SDVOB goals over the life of the resulting contract. Each proposer must demonstrate a sound management plan to ensure sub consultants compliance with all contract and scope of service provisions.

PP1 – Proposer’s Response:

Each Proposer’s proposed Project Plan must include the following elements:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Project Scope Description (Narrative)</strong></th>
</tr>
</thead>
</table>
| PP2       | The Project Scope Description shall be a narrative which explains all work to be performed by the Consultant to meet the project deliverables and requirements of the OROW solution as stated within the content of this RFP. Address the following scope of services (and others as appropriate):
  | • Project Planning  
  | • Project Management, Execution and Control  
  | • M/WBE Participation Management Plan  
  | • Application Strategy, Architecture and Planning  
  | • Detailed Requirements Definition  
  | • System Design Specification  
  | • System Construction  
  | • Configuration/Programming/Development/Integration/Data Migration  
  | • System Testing and Acceptance Testing  
  | • Product Implementation and Deployment  
  | • Communications  
  | • Change Management  
  | • Training and Knowledge Transfer  
  | • Post Implementation Warranty, Maintenance and Support |

Describe the approach in detail for performing the work and accomplishing project objectives. Fully explain and justify any significant departures from **Attachment 1**. Include a list of all technical assumptions. Provide a discussion on the important issues involved in the implementation of this effort. Include enough substantive discussion to demonstrate an understanding of NYSDOT project objectives and familiarity with applicable laws, rules, etc.

PP2 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Project Schedule</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP3</td>
<td>The comprehensive Project Schedule must include a detailed list of the tasks and the resources (e.g., Proposer and NYS), timeframes, deliverables and dependencies for each</td>
</tr>
</tbody>
</table>
task.

It is highly desirable that a fully functional OROW system is implemented by the Consultant no later than 12 months following approval of the Contract; regardless, the Project Plans shall reflect the timing of the proposed implementation schedule including acceptance testing within the specified time period.

“Fully Functional” means the following:

- The conversions for the current OROW System have been accomplished and the software has been delivered, installed and accepted for the test and production systems; and
- Acceptance testing has been successful, with all requirements (COTS and custom) proven and chosen optional features have been met; and
- The production system has been implemented and all OROW functions have been transitioned to the new OROW system.

All critical milestones, deliverables, tasks, timeframes, dependencies and the schedules’ critical path shall be clearly delineated within the Project Schedule. The project schedule should align with the defined milestone deliverables listed in the Cost Proposal.

The Project Schedule must be fully resourced – all technical and functional roles (Proposer and NYS) required to meet the deliverables must be clearly identified.

The Project Schedule shall include, but not be limited to:

- Business requirements validation;
- Design specifications;
- the configuration process;
- the conversion/migration of data;
- the acceptance of all software components;
- the acceptance by NYS of the successful results of all technical requirements testing;
- Acknowledgement by both parties regarding the beginning of the warranty period;
- the preparation of all software components in the production environment;
- holding of initial onsite online examination (as soon after contract start date as feasible);
- any Proposer customization of COTS software.
- rollout/Go-live.

Each Proposer must provide a comprehensive Project Schedule on a thumb drive in Microsoft Project standard format. The plan must also include an MS Project view which clearly depicts: a) critical path and b) major deliverables.

PP3 - Proposer’s Response:
<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>M/WBE Management Plan</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP4</td>
<td>Proposers must provide a narrative description of the proposed M/WBE management plan that shall be applied over the full life of the contract, featuring M/WBE participation summaries (including changes), goal progress, utilization reporting, and goal attainment.</td>
</tr>
<tr>
<td>PP4 - Proposer’s Response:</td>
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</table>

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Narrative Description of Project Plan</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP5</td>
<td>Proposers must provide a narrative description of the Project Plan for implementation that includes tasks, resources, timeframes, deliverables and dependencies that should be mapped to the financial proposal milestones (please do not include dollars in this section). This must also include the expected timeline for the preparation of hardware by NYS for all environments proposed by the Proposer, for the delivery and deployment of the proposed OROW application.</td>
</tr>
<tr>
<td>PP5 – Proposer’s Response:</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Key Project Staff Minimum Qualifications</strong></th>
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</thead>
<tbody>
<tr>
<td>PP6</td>
<td>Proposers are required to complete one resume form (<em>Attachment 15 – Key Personnel Resume and References</em>) for each proposed key personnel, including sub-consultant staff, who are proposed for this project under resulting Contract #C037856. Complete and submit resumes for all other proposed staff (non-key personnel). Resume summary information includes name, proposed role on this project, years of relevant experience, description of relevant experience and expertise, and two successfully reachable references. Complete one resume per proposed person. For the number of years of experience, while inclusion of partial years is allowed, please indicate start/end months (complete months only).</td>
</tr>
<tr>
<td>PP6 – Proposer’s Response:</td>
<td></td>
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<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Key Project Staff Minimum Onsite Scheduling Requirements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP7</td>
<td>Each Proposer must provide a narrative description of the Project Plan for implementation that including tasks, resources, timeframes, deliverables and dependencies that should be mapped to the financial proposal milestones (please do not include dollars in this section). This must also include the expected timeline for the preparation of hardware by NYS for all environments proposed by the Proposer, for the delivery and deployment of the proposed OROW application.</td>
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</tbody>
</table>
It is anticipated that the onsite requirements for Key Project Staff may change as the needs of the project change based on project phase. Please see below for the minimum Key Project Staff resources and onsite requirements:

<table>
<thead>
<tr>
<th>Key Project Staff Titles</th>
<th>During Pre-Implementation Activities (to Include Data Conversion and Customization / Configuration)</th>
<th>During Implementation (to Include Acceptance Testing)</th>
<th>During On-Going Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Minimum of 3.5 business days/week</td>
<td>Minimum of 3.5 business days/week</td>
<td>As needed to support the project objectives</td>
</tr>
<tr>
<td>Technical Architect</td>
<td>As needed to support the mutually agreed to project plan</td>
<td>As needed to support the mutually agreed to project plan</td>
<td>At the discretion of the Consultant to support project objectives</td>
</tr>
</tbody>
</table>

The qualifications and prior experience of the proposer are of great importance to NYSDOT. The Consultant shall create an organization chart that describes reporting relationships of all key personnel identified in this section. The Consultant shall be responsible for providing the following key personnel:

**Project Manager** - The Consultant shall provide a full-time Project Manager (PM) dedicated to this project. The PM shall have at least five (5) years experience in managing IT projects of similar scope and size. The PM shall be responsible for directing the Consultant’s resources, coordinating and communicating with NYSDOT’s Project Manager and ensuring the project deliverables are met according to the approved project plan. A Project Management Professional (PMP) designation is highly desirable.

**Technical Architect** – The Consultant shall provide a Technical Architect that will be responsible for defining, designing and developing, along side the Transportation DOT Enterprise Architect Solution Architect, the overall structure of the OROW system, and overseeing assignments of the proposer technical implementation team. The proposer’s Technical Architect shall have at least five years experience in designing and delivering projects involving the implementation of transportation management systems.

Other Key Personnel could include:

**Business Analyst**: Responsible for Maintaining Requirements traceability throughout system development and testing: documenting all Workflows, Roles, Use Cases, Test Cases and tracking results of Testing.

**Database Architect**: Responsible for the design and implementation of the proposed
database solution. Performs data analysis, data migration, data conversion, and data loading, in addition to analyzing business needs and creating a database solution to meet those needs.

**Quality Assurance Tester:** Responsible for ensuring that a future system meets documented business requirements by following a systematic process to test, document discrepancies and working with subject matter experts and technical team members to resolve those discrepancies.

**Lead System/Software Engineer:** Responsible for leading the system/software development team in the implementation of the proposed System, including creation of application specifications; design and development for any custom software; configuration and implementation of any COTS software; and System testing activities.

**Technical Editor:** Responsible for proofreading, revising, rewriting, and editing technical information to produce technical publications best suited for their targeted audience.

**Lead GIS Architect:** Responsible for overseeing the development and implementation of all GIS functionality in the system and its system interfaces, including, but not limited to, interactive mapping, spatial data management, conflation, routing and driving directions, and restriction management. The Lead GIS Architect acts as a liaison among stakeholders to elicit, analyze, communicate, and validate all GIS related system requirements.

**Web Designer:** Responsible for designing the outward facing front end for the desktop platform, to provide an intuitive interface for both external applicants and internal NYSDOT users.

**Mobile App Developer:** Working with the Lead System/Software engineer and Web Designer, responsible for developing mobile apps and to ensure smooth and consistent transition of data and functionality between desktop and mobile platforms.

**Training Lead:** It is preferred that the Training Lead have at least five years of verifiable experience with developing technical training material and performing training for similar scale projects.

Accommodations to the Key Project Staff Minimum Onsite requirements in the table above, will be made on an as-needed basis (e.g., vacations, illness) and after notice and approval of the NYSDOT Project Manager.

Proposer must clearly articulate all Consultant staff assumptions made in the formulation of their proposal.

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Knowledge Transfer and Training</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP8</td>
<td>During System Construction, the Consultant shall develop and deliver</td>
</tr>
</tbody>
</table>
(1) user training materials for all user roles.
(2) user training materials that provide instructions on the purpose and use of the system.
(3) Administration and User Manuals.

The Consultant shall update all training materials as needed to address NYSDOT comments.

Implementation Training: NYSDOT considers the training of administrators and end users to be a critical deliverable for the Consultant. Implementation training shall be completed during the first 6 months after acceptance of the product. Prior to commencement of Implementation training, Consultant will submit the training materials to NYSDOT for approval. NYSDOT reserves the right to request a substitution of the trainer if in NYSDOT’s sole discretion the assigned trainer is not satisfactory. Consultant will deliver training to NYSDOT staff and others designated by NYSDOT. NYSDOT will provide training facilities and network connections for all of the training sessions.

Implementation training will be performed in person, on-site at each of the 11 Regions (a map and location information for each NYSDOT Region is available via: https://www.dot.ny.gov/about-dot.

Following Implementation, Consultant shall be required to provide up to three Refresher Trainings at dates and times to be scheduled. The Refresher Trainings shall occur in the New York City area, the Albany area, and the Rochester/Buffalo area. NYSDOT will provide the training location.

PP8 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – Data Security Requirements</th>
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<tbody>
<tr>
<td>PP9</td>
<td>The system must incorporate safeguards to ensure the data is protected.</td>
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<tr>
<td></td>
<td>• The solution must conform to all applicable NYS Office of ITS Security Standards and Policies (accessible at <a href="https://its.ny.gov/esi/policies/security">https://its.ny.gov/esi/policies/security</a>).</td>
</tr>
<tr>
<td></td>
<td>• The system should generate alerts when security controls are violated.</td>
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<td></td>
<td>• The system must scan all files for viruses when uploading before accepting them into the data repository.</td>
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<tr>
<td></td>
<td>• When a virus is detected, the system should quarantine external file transfers and notify appropriate users.</td>
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<tr>
<td></td>
<td>• The system must enable data encryption, at the data field level, according to the Federal Information Processing Standard (FIPS) Publication 140-2.</td>
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<tr>
<td></td>
<td>• The system should not permit audit records to be physically deleted or altered, except as part of a system administration archival process.</td>
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<tr>
<td></td>
<td>• The system should restrict saving any sensitive information in any external files, including configuration, log, and data files.</td>
</tr>
</tbody>
</table>
• PPSI information must be secured from unintentional disclosure.
• Any stored documents that are generated and/or uploaded to the solution must be secured from unauthorized access.

PP9 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Role Based Security Requirements</strong></th>
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</thead>
<tbody>
<tr>
<td>PP10</td>
<td>The system must support role-based security for regional and main office users that includes system administrators, OROW program administrative staff, operational ROW roles, and other DOT staff as needed (Legal, Design, etc.):</td>
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<tr>
<td></td>
<td>• Access to create, change, or delete information and the ability to participate in workflow activities must incorporate user roles.</td>
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<tr>
<td></td>
<td>• All users should be able to view and link to Comparable Sales records across NYS.</td>
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<tr>
<td></td>
<td>• Regional users should be permitted Read access to ROW project and Property Management records outside of their Region.</td>
</tr>
<tr>
<td></td>
<td>• Where tasks are performed by one person, the system must prevent associated reviews of that task output from being performed by the same person.</td>
</tr>
<tr>
<td></td>
<td>• Information displayed on the Citizen/Business portal must support protecting the privacy of users.</td>
</tr>
<tr>
<td></td>
<td>• External users (Consultants) should be able to view and enter information regarding the work that has been assigned to them and any related Project records.</td>
</tr>
<tr>
<td></td>
<td>• External Consultants assigned to complete Appraisal Reports must have access to view any property, claimant, comparable Sales, and available site inspection information associated with their assignment.</td>
</tr>
<tr>
<td></td>
<td>• External Consultants assigned to complete Appraisal Reports must have access to create and update Appraisal information that is captured in the system for only those Appraisals assigned to them.</td>
</tr>
<tr>
<td></td>
<td>• External Consultants assigned to perform Title Searches must have access to view and update Title information associated with only those Maps/Parcels assigned to them.</td>
</tr>
</tbody>
</table>

PP10 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – <strong>Requirements for DevOps, Microservices and Containerization</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PP11</td>
<td><strong>Introduction</strong></td>
</tr>
<tr>
<td></td>
<td>The New York State Office of Information Technology Services (ITS) provides infrastructure, platform and shared services components in the New York State Data Center (ZEN) located in the State University of Albany Campus, Albany, NY. NYS ITS enterprise shared services ‘desired’ application infrastructure is DevOps, Microservices and Containerization.</td>
</tr>
<tr>
<td></td>
<td>Proposer’s are to provide a response as to whether their proposed solution does or does not conform to this ‘desired’ application infrastructure.</td>
</tr>
</tbody>
</table>
The Proposer, if the proposed solution conforms, should demonstrate the following characteristics as part of the core solution in supporting an agile software engineering practice based on secure DevOps with the goal to provide iterative development cycles, increased deployment frequency and more dependable releases, in close alignment with the business requirements identified in this RFP.

The characteristics that need to be demonstrated for the core application solution include, but not limited to the following traits:

- Release Planning
- Continuous Integration
- Continuous Delivery
- Continuous Testing
- Continuous Monitoring
- Continuous Security
- Continuous Improvement

The vendor shall provide detailed specification on how they would align software technologies in their proposed core solution to align with the above required agile secure software engineering characteristics and shall demonstrate the use of automation wherever applicable for the following capabilities such as, but not limited to:

- Infrastructure-as-Code
- Delivery Pipeline/Workflow
- Build Automation including Orchestration
- Package Environments for Configuration Management
- Monitoring including Real-time notifications and capability for Postmortem analysis
- Test Environments

In support of the agile software engineering traits requested above, the vendor should support the capability to provide loosely-coupled microservices as part of their core application solution in close alignment with the business requirements identified in this RFP.

The proposed core solution should avoid using a monolithic architecture model and support the capability to break down features and services into a collection of small, secure, repeatable loosely-coupled functional components with the ability to scale when needed. Each of these loosely-coupled services should also be able to interact with each other using stable and well-defined APIs while being independent of each other.

Additionally, each of the identified microservices should have its own codebase and a separate isolated running process (or processes) that can be built, deployed and scaled separately.

The vendor should demonstrate as part of the proposed core solution on how they would demonstrate the following characteristics for microservices including, but not limited to:

- Modularity
• Technological flexibility and
• Optimized scalability

The vendor should demonstrate wherever applicable the capability to use containerization as an approach to secure software engineering especially for service development using microservices in close alignment with the business requirements identified in the RFP.

Additionally, the vendor should implement containerization (container-based virtualization) of all components for which containerization is an option and demonstrate the capability to support the following characteristics including, but not limited to:

• Maximum portability between software deployment environments including private, public and hybrid cloud models
• Minimize time and costs with automation
• Maximize the deployment of stateless services
• Support the principle of Elasticity & Disposability
• Support the principle of environment parity
• Differentiate between Admin and Application service processes

PP11 – Proposer’s Response:
New York State Department of Transportation
Request for Proposals for Contract #C037856 for
Right of Way and Real Estate IT System Services

Attachment 20

NYS Office of Information Technology Services
Technology Service Standards Overview
(aka Exhibit 2 Dated February 14, 2018)

Proposer’s Name: Enter Proposer Name Here

Date: ______________

Instructions:
4. A response is required for each requirement contained within this document.
5. Proposers shall acknowledge that they understand the ITS Preferred Solutions and note if their solution is outside of the Preferred Solutions.
6. If additional space is needed Proposer should clearly label their response with the requirement identifier.
7. NYS reserves the right to allow the Proposer to correct obvious errors of omission.

Introduction

The New York State Office of Information Technology Services (ITS) provides infrastructure, platform and shared services components in the New York State Data Center (ZEN) located in the State University of Albany Campus, Albany, NY. This NYS footprint is used to build, configure, and customize proposed solutions to support New York State (NYS) customer Agency business requirements. A proposed solution must use the supported enterprise shared service platforms and components whenever practical. ITS enterprise technologies are available for the successful bidder to build and configure a solution that meets business requirements defined by the NYS customer agency. All builds and configurations must comply with NYS Information Technology Policies, Standards, and Best Practice Guidelines. These guidelines can be found on the ITS website at https://www.its.ny.gov/tables/technologypolicyindex.

Using NYS ITS enterprise shared services and components is the preferred architecture; however, other products and components may be proposed based on potential integration advantages and/or alignment with the ITS enterprise strategic direction. If the proposed solution contains other products and components, the New York State Chief Technology Officer (CTO) and the Enterprise Information Security Office (EISO) must review and approve prior to a NYS customer agency proceeding with accepting the proposed solution.

This document does not represent an exhaustive list of supported ITS products and services and is subject to change.
ITS Managed Services – Infrastructure

2.1 Supported Servers and Database
Virtual servers to support multiple sized workloads running current supported operating systems and application servers. Service features include configuration of memory and CPU based on tiers (small, medium, large), managed network, system monitoring, security, and capacity planning:

**Operating Systems:**
- Red Hat Enterprise Linux (RHEL)
- Microsoft Windows Server
- IBM AIX (Advanced Interactive eXecutive)

**Application Servers:**
Preferred Java JEE application servers for custom JEE development:
- Red Hat JBoss EAP

Preferred Java JEE application servers for vendor specific implementations:
- IBM Websphere
- Oracle WebLogic Server

Preferred Microsoft .NET application servers for customer and vendor specific implementations:
- Microsoft .NET Paas on Apprenda

**Database Servers:**
Managed relational database services include database support and physical database design in addition to infrastructure support. The service targets OLTP structured data workloads. **Supported technologies include current releases of:**
- Oracle Database Server
- Microsoft SQL Server
- IBM DB2 LUW
- MongoDB

2.2 Example Application Hosting Stacks

<table>
<thead>
<tr>
<th>Web Server</th>
<th>Application Server</th>
<th>Database</th>
<th>Software Workloads</th>
</tr>
</thead>
<tbody>
<tr>
<td>RedHat HTTP (Apache)</td>
<td>RedHat JBoss</td>
<td>Oracle DB / MS SQL / IBM DB2 LUW</td>
<td>Custom Java J2EE or COTS*</td>
</tr>
<tr>
<td>Microsoft IIS</td>
<td>Microsoft .NET</td>
<td>MS SQL</td>
<td>Custom.NET or COTS</td>
</tr>
<tr>
<td>IBM HTTP</td>
<td>IBM Websphere</td>
<td>Oracle DB / MS SQL / IBM DB2 LUW</td>
<td>COTS</td>
</tr>
<tr>
<td>Oracle HTTP</td>
<td>Oracle WebLogic</td>
<td>Oracle DB / MS SQL</td>
<td>COTS</td>
</tr>
</tbody>
</table>

*Note: COTS workload includes packaged applications that prefer configuration over custom build.*
ITS Managed Services – Enterprise Software

3.1 Identity Management
User authentication is available using ny.gov ID and Active Directory.

- Agency (internal) user authentication must leverage Active Directory Federation Services (ADFS).
- External users and citizens (business entities and public) that are not integrated through ADFS must use ny.gov ID accounts. NY.gov ID is an online service that allows you to use your user ID and password to sign in securely to NY.gov ID participating government online services.

3.2 API Management
NYS ITS API Gateway Service makes the process of building, publishing and operating APIs significantly simpler and more consistent. External facing interfaces must use, and Internal interfaces may use, when practical.

- RogueWave Akana

3.3 Managed File Transfers
NYS ITS Managed File Transfer Service provides a centrally managed, secure and dependable file transfer with internal and external partners. It helps NYS Agencies avoid the risk and operational issues that can result from using loosely controlled file-transfer servers.

- Fixed File Gateway: IBM Sterling
- Large Ad-hoc: IBM Aspera

3.4 Business Process Management (BPM)
BPM offers an agile, scalable business model that provides agencies to respond to dynamic demands more quickly with increased productivity and accelerated innovation.

- Policy Rules Engine – Oracle Policy Administration
- Business Rules Engine – IBM ODM

3.5 Document Management
NYS ITS Enterprise Content Management Service provides a set of technical capabilities that can be leveraged by customer agencies to simplify the integration of document management requirements:

- IBM FileNet P8

3.6 Business Intelligence and Analytics
Reporting, Business Intelligence and Data Analytics capabilities is provided through the following set of supported technologies:

- IBM Cognos (preferred)
- Tableau (preferred)
- OBIEE
- SAS
3.7 Customer Correspondence
Document generation and correspondence with delivery of the documents to a designated output channel is supported by ITS through services based on the project system design specifications.

- OpenText Exstream

3.8 Geographic Information Systems (GIS)
The statewide GIS platform provides capability to share and discover geographic information, create and manage state geographic assets, visualize and analyze geospatial information, and collaborate geographic data in real-time. It is used to find, create and share maps to meet analytical requirements. All maps and APIs should go through the standard NYS offering rather than Google, Bing or other industry sources. GIS services such as map and feature services is exposed to service consumers as a RESTful end-point.

- ESRI ArcGIS

3.9 Data Management
Extract, Transform, and Load (ETL) is provided through the following set of supported technologies:

- Oracle Data Integrator
- IBM InfoSphere DataStage
- Microsoft SQL Server Integration Services

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – System Technology Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT1</td>
<td>The Proposer shall describe how their proposed Right of Way &amp; Real Estate IT System solution will fit into the overall infrastructure and architecture requirements of NYS IT systems defined in this Attachment 20, deployed/hosted at New York State’s Data Center, and provide a scalable design to allow for future growth. Specifically, the Proposer shall present a description how each of Attachment 20’s requirements shall be met within their solution, as applicable.</td>
</tr>
<tr>
<td></td>
<td>1. Introduction</td>
</tr>
<tr>
<td></td>
<td>• Compliance with NYS Information Technology Policies, Standards, and Best Practice Guidelines)</td>
</tr>
<tr>
<td></td>
<td>2. ITS Managed Services – Infrastructure</td>
</tr>
<tr>
<td></td>
<td>2.1 Supported Servers and Database</td>
</tr>
<tr>
<td></td>
<td>• Compliance of solution to current supported operating systems and application servers</td>
</tr>
<tr>
<td></td>
<td>3. ITS Managed Services – Enterprise Software</td>
</tr>
<tr>
<td></td>
<td>3.1 Identity Management</td>
</tr>
<tr>
<td></td>
<td>3.2 API Management</td>
</tr>
<tr>
<td></td>
<td>3.3 Managed File Transfers</td>
</tr>
<tr>
<td></td>
<td>3.4 Business Process Management (BPM)</td>
</tr>
<tr>
<td></td>
<td>3.5 Document Management</td>
</tr>
<tr>
<td>Section</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>3.6 Business Intelligence and Analytics</td>
<td></td>
</tr>
<tr>
<td>3.7 Customer Correspondence</td>
<td></td>
</tr>
<tr>
<td>3.8 Geographic Information Systems (GIS)</td>
<td></td>
</tr>
<tr>
<td>3.9 Data Management</td>
<td></td>
</tr>
</tbody>
</table>

Proposer IT1 Response:
New York State Department of Transportation
Request for Proposals for Contract #C037856 for
Right of Way and Real Estate IT System Services

Attachment 23
Technical Proposal Response: Ongoing System Support, Maintenance and
Enhancement Requirements

Proposer’s Name: Enter Proposer Name Here

DATE: ________________

Instructions:
1. For each requirement contained within this document a response is required.
2. If additional space is needed then each Proposer should clearly label their response with
   the requirement identifier.
3. NYS reserves the right to allow itself and/or the Proposer to correct obvious errors of
   omission.
4. Within each of the responses, and as applicable, identify which requirement(s) from
   Attachment 1 Functional Requirements will be met.

For each of the following business challenges, provide detailed responses as to how the offered
solution meets the requirement.

Below is a presentation of the Support Service Levels expected for the OROW System:

**ITS Technical Support, Maintenance and Service Desk Services**
The Office of Information Technology Services (ITS) is directly responsible for all aspects of IT
hardware and software including the servers, end-user personal computers, and network
connectivity. In addition, ITS is partially or indirectly responsible for access to the Department's
mainframe, and most telecommunication devices including phones and fax machines.

All servers are located in the State’s Primary Data Center which is: a physically secure space
with specific environmental controls, emergency power, and other means of risk mitigation.
Only authorized personnel are allowed into the facility. ITS is responsible for backing up all
files, databases and systems. ITS is responsible for the enterprise backup solution, which
performs disk to disk backup for servers and data at the State’s Primary data center. The data is
replicated nightly to the State’s Disaster Recovery site.

ITS has a NYS Disaster Recovery Plan that is a living document and describes ITS’ approach
and plans for technology disaster recovery at an alternative location. The plan is complimented
by the ITS Continuity of Operations Plan (COOP), Agency COOPs and Individual System
Contingency Plans for specific systems. The disaster recovery plan will cover essential and
critical infrastructure elements, systems and networks, in accordance with key state priorities.
NYSDOT users will be instructed to report the problem to the ITS Service Desk which provides Level 1 Intake and Support 24x7x365 and routes to the appropriate ITS Resolver Group. ITS will follow a standard process to triage and analyze the issue as depicted in this Attachment. If ITS determines that the problem can only be resolved by the Proposer, ITS will open a ticket with the Proposer’s Help Desk.

Proposer Technical Support, Maintenance and Help Desk Services
The Proposer must provide Help Desk support during normal business hours, Mon-Fri 7:30am – 5:00pm EST, excluding designated NYS Holidays. There will be two types of calls made to the Proposer’s Help Desk: system problems related to the workings of the application; and problems with functional issues within the application. In these instances, it is expected that specified NYSDOT and/or ITS staff can open a ticket with the Proposer’s Help Desk.

The Proposer’s Help Desk support must include the following:
1. Email and phone support (via a toll-free #) Mon-Fri 7:30am – 5:00pm EST, excluding designated NYS Holidays.
2. Remote diagnostics.
3. Access to the Proposer’s ticketing system.

The Proposer must participate in on-going support status meetings with ITS personnel, as needed, to troubleshoot problems with the system.

The Proposer is responsible for Corrective Maintenance. This type of maintenance includes diagnosing and fixing defects including, but not limited to, those found by users. Perfective Maintenance (i.e., implementing new or changed user requirements which concern functional enhancements to the software) will be invoked following the ITS Release and Deployment Management process as described in Attachment 26. Adaptive Maintenance (i.e., modifying the system to cope with changes in the software environment), where possible, will be the responsibility of ITS. ITS may require additional support from the Proposer for adaptive maintenance. Such support must be provided through a scheduled WebEx event wherein ITS will act as Server Administrators to support triage, troubleshooting and resolution.

A. Service Level Objectives.
The Proposer must meet or exceed the Service Level Objective (SOL) indicated below:

<table>
<thead>
<tr>
<th>Defect Severity</th>
<th>Maximum Response Time</th>
<th>Maximum Resolution Time</th>
<th>Service Level Metric to be Met</th>
<th>Service Credit to State</th>
<th>Resources Applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity 1</td>
<td>2 clock hours</td>
<td>Same Calendar Day</td>
<td>98%</td>
<td>3% monthly support invoice for maximum response time; 3% monthly support invoice for maximum resolution time</td>
<td>Proposer will provide resources to fix until completed to the satisfaction of NYSDOT.</td>
</tr>
</tbody>
</table>
Severity 2

| 4 clock hours | 2 calendar days | 90% | 3% monthly support invoice for maximum response time; 3% monthly support invoice for maximum resolution time | Proposer will provide resources to fix until completed to the satisfaction of NYSDOT. |

Severity 3

| 12 clock hours | 10 calendar days | 80% | 3% monthly support invoice for maximum response time; 3% monthly support invoice for maximum resolution time | Proposer will provide resources to fix until completed to the satisfaction of NYSDOT. |

NOTES ON SERVICE LEVEL OBJECTIVES:

1. SLAs do not apply during the development and implementation phases. The SLOs and defect remediation processes start after the system is live and deployed to users.
2. The resolution time starts upon notification to the appropriate responsible party.
3. The SLOs are NYS ITS Standard definitions. If, after following defect triage, the Severity Level is under dispute, the defect can be reviewed with the NYSDOT Application Owners to determine if a change to the Severity is warranted.
4. If defect analysis determines that the resolution is an enhancement, the resolution will be managed as a Project Change Request.

Definitions of Severity Defects (Note: The State will determine the level of severity of the defect based on the business impact):

Severity 1 Defect - A problem whose nature and/or severity prevent the State from continuing its business. A Level 1 Defect may have one or more of the following characteristics:

1. The application hangs indefinitely and causes other State applications to hang;
2. The application crashes and causes other State applications to crash; and/or
3. A security incident has occurred or is suspected to have occurred.

NOTE: Severity 1 defects are managed by a ‘Incident Manager’ where all involved groups and parties are and work to resolve the defect in a timely manner.

Severity 2 Defect - may have one or more of the following characteristics:

1. The performance, functionality or usability of one or more parts of the application are severely degraded or not available;
2. Multiple users are impacted; and/or
3. One or more business functions are unavailable or unusable by the end users.
4. Incorrect application business function, resulting in data integrity issues.

Severity 3 Defect - A failure of a system or part thereof which has a minor impact on a State business process and can be handled on a non-immediate basis. Examples may include user requests (e.g., a report is not formatted correctly) and peripheral problems (e.g., output fails to print properly).
The Proposer shall not close a Defect Fix unless that Fix shall have been demonstrated to either:
(a) repair the functionality, performance and usability of the application to its pre-Defect level or
(b) improve the functionality, performance and usability of the application from its pre-Defect level.

For each of the following requirements, provide detailed responses as to how the Proposer’s system meets the requirement.

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – System Support and Maintenance Plan:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT1</td>
<td>The Proposer must describe the ongoing support and maintenance services the Proposer is proposing to provide in support of the proposed solution. The Proposer shall provide a logistics support plan addressing in detail each of the following aspects of system support:</td>
</tr>
<tr>
<td></td>
<td>• Include a definition of the roles of the Proposer with a list of the responsibilities of each role related to the processes and support of the proposed solution.</td>
</tr>
<tr>
<td></td>
<td>• Describe the proposed solution’s system alerts, monitoring and management tools (defining where these items are addressed with COTS or customized) that will be available to NYS.</td>
</tr>
<tr>
<td></td>
<td>• Describe in detail what methods are available to contact Proposer for system support i.e. web site, toll free phone number, etc.</td>
</tr>
<tr>
<td></td>
<td>• Detail procedures and guidelines for escalation of problems which cannot be solved in a timely manner. Please indicate if there are multiple levels of support and if so, the timeframes for the Proposer’s internal escalation process to the next level of support.</td>
</tr>
<tr>
<td></td>
<td>• Describe the issue tracking and resolution reporting documentation that will be provided.</td>
</tr>
<tr>
<td></td>
<td>• Detail the proposed communication strategy for issues status and resolution, system health and support performance.</td>
</tr>
<tr>
<td></td>
<td>• Include an organization chart of the Proposer’s support structure</td>
</tr>
<tr>
<td></td>
<td>• Certify that all future upgrades made to the base COTS solution will include any and all customizations made to meet the NYSDOT Requirements in this RFP. Customizations in this context should include all software modifications to the application interfaces and standard reports.</td>
</tr>
<tr>
<td></td>
<td>• The vendor must provide documentation and support for implementation and post-implementation operations.</td>
</tr>
</tbody>
</table>

MT1 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – System Continuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT2</td>
<td>The Proposer must include a description of the Proposer’s Continuity Plan that meets, at a minimum, the following requirements:</td>
</tr>
<tr>
<td></td>
<td>• The system shall be able to automatically back out incomplete processed transactions if the system fails.</td>
</tr>
<tr>
<td></td>
<td>• The system shall gracefully handle database failovers in a clustered database server</td>
</tr>
</tbody>
</table>
configuration.
- The system shall have fully documented restart capabilities for the application’s on-line and batch processing components.
- The system must be capable of functioning in a load balanced and redundant configuration. End user session persistence, in the event of web/app server failover, would be desired.

MT2 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – System Error Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT3</td>
<td>The Proposer must include a description of the Proposer’s Error Management Plan that meets, at a minimum, the following requirements:</td>
</tr>
<tr>
<td></td>
<td>• The solution must provide recovery capability supporting retries for faults and error handling that includes display of network and database errors for troubleshooting.</td>
</tr>
<tr>
<td></td>
<td>• The solution must provide logging capabilities to trap user access and application events.</td>
</tr>
</tbody>
</table>

MT3 – Proposer’s Response:

<table>
<thead>
<tr>
<th>Rqmt. No.</th>
<th>Requirement Description – Optional Services:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT4</td>
<td>The Proposer must:</td>
</tr>
<tr>
<td></td>
<td>Acknowledge its agreement to provide Optional Services during the term of the Contract;</td>
</tr>
<tr>
<td></td>
<td>Detail the Proposer’s commitment to provide such resources;</td>
</tr>
<tr>
<td></td>
<td>Describe how the Proposer proposes to provide said services; and</td>
</tr>
<tr>
<td></td>
<td>Provide detail regarding the availability and capacity of the Proposer to provide such services.</td>
</tr>
</tbody>
</table>

MT4 – Proposer’s Response:
ITS Experience Design Approach

Introduction

A primary measure of success for this project is the “citizen experience” that results from the use of this system within the wider context of interacting with the State of New York. Citizen (and employee) experiences should be intentionally and excellently designed through a human-centric approach. To that end, various experience design methods shall be coordinated within a holistic design plan. From understanding the stakeholders of the system and their journeys through key scenarios, to wireframes, to prototyped interaction flows, to visual design, a coordinated Experience Design Plan shall guide research, design, development, and validation of user interactions.

Experience Design Overview

Experience design activities shall be grounded in industry standard methodologies. “Experience design” as an umbrella term includes many supporting sub-disciplines known by varying terms in the industry such as customer experience design, user research, user experience design, interaction design, human computer interaction (HCI), user interface design, etc.

Experience Design Plan

The bidder should prepare, as a component of the response to this request for proposal, a 2-3 page high-level Experience Design Plan which illustrates how the experience design activities will integrate with and inform other phases within the context of the project timeline.

The bidder’s expertise in defining the design approach and phases specific to this project’s context is valued. High scoring bids will include behavioral, attitudinal, qualitative and quantitative approaches for understanding and creating user experiences. Below are experience design areas and representative methods to show the expected nature of the plan. The Experience Design Plan should specify similar activities, or give justification for divergence. The submitted Experience Design Plan will become the guide from which experience design project activities are defined and elaborated.
• **User Research** – Learning about the users of the system, their needs, goals, and behaviors. *Methods: stakeholder interviews, primary user research, observation, surveys, etc.*

• **User and Behavior Modeling** - Insights organized from the research are synthesized into understandable artifacts representing users and interaction patterns. *Methods: personas, scenarios, user stories, journey maps, etc.*

• **Prototyping** – Flows and interactions are created and tested, gaining fidelity as they are finalized. An iterative approach to prototyping is valued that allows for both stakeholder and end user influence. *Methods: user flows, wireframes, prototypes (lo-fi, hi-fi), etc.*

• **Usability Testing** – Prototypes and implemented solutions are subjected to usability testing with actual representative users to validate design decisions or drive improvements.

  The Experience Design Plan should incorporate multiple appropriately spaced rounds of usability testing. Usability testing participants shall be representative of actual users and shall be compensated at industry standard rates (if not state staff). All expenses for recruiting, conducting, and compensating shall be the responsibility of the contractor.

  The plan should specify the following:
  
  ○ Specific usability testing methodology to be used
  ○ Number of participants/hours of testing that will be done
  ○ Whether the testing will be held remotely or in person
  ○ A description of how participants will be recruited and compensated

  Further usability testing expectations are detailed in the exhibit: “ITS Usability Testing Approach”

**Experience Design Expertise**

Experience design activities should be overseen by an Experience Design Lead and carried out by practitioners skilled appropriately to each phase and activity. The contractor should propose an Experience Design Lead as part of their Staffing Plan response.
ITS Enterprise Experience Design Coordination

To ensure enterprise alignment, the proposed design methodology, toolset, and detailed Experience Design work plan shall be reviewed with the ITS Enterprise Experience Design Team (EED) before experience design work begins. Because experience design success is a shared goal, EED will make a concerted effort enable design efforts within the project.

The Experience Design Lead should plan to consult with EED at various inflection points throughout the project. These points may be triggered/requested as a result of research activities, user testing, or milestones in the project plan.

The contractor shall schedule a retrospective meeting after the experience design activities are complete with the Experience Design Lead and EED to identify how to improve design efforts/outcomes on future NYS projects based on the lessons learned during this project.

Design Software

In the interest of creating artifacts and assets that have ongoing reuse, preference is that prototyping be done using the ITS standard toolset of Adobe Creative Cloud and UXPin (ITS can provide licenses). A modular design approach using UXPin’s component libraries and “spec mode” will provide future project staff an effective means of rapidly prototyping new features. UXPin utilization will also enable design patterns to be easily shared with other projects.

Project Integration

Tight integration between experience design work and other roles/activities is very important – especially between early research/modeling activities and business analysis, as well as between interaction design/prototyping and development. The experience design work should intentionally build bridges with project managers, business analysts, and developers who may not be accustomed to working in a design-informed manner. Experience design is a “team sport”, so enabling all roles in the project to make informed micro-decisions that intentionally affect the experience outcomes is desired.
Design Repository and Communication

Design artifacts and resources should be organized in a central location and made available to all teams and stakeholders. Coordinated promotion at regularly scheduled meetings is desired to bring broad awareness to the value of the experience design activities and artifacts.

New York State Brand

NYS Branding Guidelines: This is statewide (for the executive branch) and is for all design formats, but does not address web interfaces specifically. Note that the web colors are superseded in the Global Navigation Guidelines (below; corrected for accessibility).

NY.GOV Style Guidelines: These were the style guidelines for the NY.GOV website redesign. It can be used for inspiration and to inform style decisions, but should not be interpreted as guidelines for all websites or applications. See http://www.ny.gov and http://www.governor.ny.gov first and then refer back to guidelines for examples of this design effort. There will be many interaction patterns and design elements that were not covered in these guidelines, or where use cases will cause the patterns and styles to necessarily evolve in this project.

Global Navigation Guidelines: This is a two part document relating to technical implementation of the "Global Navigation" user interface component as well as content strategy related to the same. It was a first major effort toward a consistent content navigation strategy for public facing content-centric websites. If similar navigation is needed, this is a good pattern to consider for consistency. These guidelines also list the new web-friendly versions of the brand colors. http://on.ny.gov/GlobalNav

Abridged Brand and Web Reference: This document is simply a selection of pages from the main branding documents. It's intended as a usable document that references the branding specifications needed during design and development, without the details needed when diving into distinct elements or components.

Responsive Design

Responsive design device-class targets should be research driven. The below stated goals should be taken as a starting point default, which can then be evaluated in the context of user groups and scenarios. For instance, based on research, there may be
situations/components where employee interaction scenarios may call for Responsive Web Design down to the level of mobile phones.

“Responsive web design techniques should be utilized so that customers are able to access and easily navigate the systems with desktops, laptops, tablets and mobile smart phones. Employee facing applications should be tablet/touch optimized.”

Transition

All experience design artifacts and source files created during the project shall be compiled and delivered to both the ITS project manager and ITS Enterprise Experience Design at the end of the engagement. This should include the assets that were part of the design repository but will likely also include assets that were not made available through the repository.

Artifacts and files include, but are not limited to: Adobe Creative Cloud source files (Photoshop, Illustrator, etc.), wireframes, prototypes, raw research data, audio/video recordings, etc.